

## ABSTRACT OF THE DISCLOSURE

A system for receiving data from an asynchronous network and transmitting such data onto a synchronous network is disclosed. In a particular voice over network embodiment, a system (100) for processing voice data packets may include a voice packet buffer memory system (108) with a jitter buffer (118) and jitter buffer valid bit (JBVB) or jitter buffer state memory (120). A jitter buffer (118) may include groups of entries that each store data for a different voice channel. A JBVB memory (120) may include entries that each show the status of a particular entry for multiple jitter buffer groups. When data is written to a jitter buffer entry, a corresponding JBVB memory bit can be set to a valid state. When data is read from a jitter buffer entry, a corresponding state memory bit can be set to an invalid state. Jitter buffer data may be read with a corresponding state memory bit. If a corresponding JBVB memory bit is valid, data from a jitter buffer (118) may be provided as an output. If a corresponding JBVB memory bit is invalid, a loss recovery algorithm may compensate for such invalid jitter buffer data.